AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A Raman amplifying apparatus for amplifying a WDM signal, comprising:

a measuring means for measuring a power of a first back-scattered light, coming from an optical fiber, arising from a first power of an excitation light, and a power of a second back-scattered light, coming from [[the]] optical fiber, arising from a second power of [[the]] said excitation light which is larger than [[the]] said first power;

an outputting means for outputting [[an]] said excitation light to [[the]] said optical fiber, the wavelength of said excitation light ~~which~~ is different from the wavelength of [[the]] said first back-scattered light and the wavelength of [[the]] said second back-scattered light; and

a controlling means for controlling [[the]] said second power of said excitation light so as to make the ratio of the power of said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber~~; and~~

~~a demultiplexing means for demultiplexing at least one~~

~~of the first back-scattered light and the second back-scattered light coming from the optical fiber~~.

2. (canceled)

3. (currently amended) The Raman amplifying apparatus as claimed in claim [[2]] 1, wherein:

[[the]] said first power of said excitation light is zero ~~amount of power~~, and [[the]] said second power of said excitation light is non-zero ~~amount of power controlled by the controlling means~~.

4. (currently amended) A Raman amplifying apparatus for amplifying a WDM signal, comprising:

an excitation light outputting means for outputting an excitation light to an optical fiber;

a test light outputting means for outputting a test light to [[the]] said optical fiber, the wavelength of ~~which~~ said test light is different from the wavelength of [[the]] said excitation light;

a measuring means for measuring a power of a first back-scattered light, coming from [[the]] said optical fiber, excited by a first power of [[the]] said excitation light, and a power of a second back-scattered light, coming from [[the]] said

optical fiber, excited by a second power of [[the]] said excitation light which is larger than [[the]] said first power; and

a controlling means for controlling [[a]] said second power of [[the]] said excitation light so as to make the ratio of the power of said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber~~; and~~

~~a multiplexing or demultiplexing means for multiplexing or demultiplexing connected to the excitation light outputting means, the test light outputting means and the optical fiber~~.

5. (canceled)

6. (currently amended) A Raman amplifying apparatus for amplifying a WDM signal, comprising:

a measuring circuit that measures a power of a first back-scattered light, coming from an optical fiber, arising from a first power of an excitation light, and a power of a second back-scattered light, coming from [[the]] said optical fiber, arising from a second power of [[the]] said excitation light which is larger than [[the]] said first power;

an outputting circuit that outputs [[the]] said excitation light to [[the]] said optical fiber, the wavelength of

said excitation light ~~which~~ is different from the wavelength of [[the]] said first back-scattered light and the wavelength of [[the]] said second back-scattered light; and

a controller that controls [[the]] said second power of said excitation light so as to make the ratio of the power of said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber~~; and~~

~~a WDM decoupler that decouples at least one of the first back-scattered light and the second back-scattered light coming from the optical fiber~~.

7. (canceled)

8. (currently amended) The Raman amplifying apparatus as claimed in claim [[7]] 6, wherein:

[[the]] said first power of said excitation light is zero ~~amount of power~~, and [[the]] said second power of said excitation light is non-zero ~~amount of power controlled by the controller~~.

9. (currently amended) A Raman amplifying apparatus for amplifying a WDM signal, comprising:

an excitation light outputting circuit that outputs an excitation light to an optical fiber;

a test light outputting circuit that outputs a test light to [[the]] said optical fiber, the wavelength of which is different from the wavelength of [[the]] said excitation light;

a measuring circuit that measures a power of a first back-scattered light, coming from [[the]] said optical fiber, excited by a first power of [[the]] said excitation light, and a power of a second back-scattered light, coming from [[the]] said optical fiber, excited by a second power of [[the]] said excitation light which is larger than [[the]] said first power;[[;]] and

a controller that controls [[the]] said second power of said excitation light so as to make the ratio of the power of said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber~~; and~~

~~a WDM coupler connected to the first outputting circuit and the second outputting circuit and the optical fiber~~.

10. (canceled)

11. (currently amended) A relay station for relaying a WDM signal, comprising:

a measuring circuit that measures a power of a first back-scattered light, coming from an optical fiber, arising from a first power of an excitation light, and a power of a second back-scattered light, coming from [[the]] said optical fiber, arising from a second power of [[the]] said excitation light which is larger than [[the]] said first power;

an outputting circuit that outputs [[the]] said excitation light to [[an]] said optical fiber, the wavelength of said excitation light ~~which~~ is different from the wavelength of [[the]] said first back-scattered light and the wavelength of [[the]] said second back-scattered light;

a controller that controls [[the]] said second power of said excitation light so as to make the ratio of the power of said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber; and

~~a WDM coupler that decouples at least one of the first back-scattered light and the second back-scattered light; and~~

an optical amplifier that amplifies a WDM signal inputted from said optical fiber and outputs said WDM signal to another optical fiber ~~through the WDM decoupler and outputs the WDM signal to another optical fiber~~.

12. (canceled)

13. (currently amended) The relay station as claimed in claim [[12]] 11, wherein:

[[the]] said first power of said excitation light is zero ~~amount of power~~, and [[the]] said second power of said excitation light is non-zero ~~amount of power controlled by the controller~~.

14. (currently amended) A relay station for relaying a WDM signal, comprising:

an excitation light outputting circuit that outputs an excitation light to an optical fiber;

a test light outputting circuit that outputs a test light to [[the]] said optical fiber, the wavelength of which is different from the wavelength of [[the]] said excitation light;

a measuring circuit that measures power of a first back-scattered light, coming from [[the]] said optical fiber, excited by a first power of [[the]] said excitation light, and a power of a second back-scattered light, coming from [[the]] said optical fiber, excited by a second power of [[the]] said excitation light which is larger than [[the]] said first power[[;]] and

a controller that controls [[the]] said second power of said excitation light so as to make the ratio of the power of

said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber; and

~~a WDM coupler connected to the first outputting circuit, the second outputting circuit and the optical fiber; and~~

an optical amplifier that amplifies ~~inputted~~ a WDM signal inputted from said optical fiber and outputs said WDM signal to another optical fiber ~~through the WDM decoupler and outputs the WDM signal to another optical fiber~~.

15. (canceled)

16. (currently amended) A method of measuring Raman gain of an optical fiber, comprising steps of:

outputting an excitation light to [[the]] said optical fiber;

measuring a power of a first back-scattered light, coming from [[the]] said optical fiber, arising from a first power of [[an]] said excitation light, and a power of a second back-scattered light, coming from [[the]] said optical fiber, arising from a second power of [[the]] said excitation light which is larger than [[the]] said first power; and

controlling [[the]] said second power of said excitation light so as to make the ratio of the power of said first back-

scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber based on a result the measuring step~~,~~

~~decoupling at least one of the first back-scattered light and the second back-scattered light coming from the optical fiber~~.

17. (canceled)

18. (currently amended) The method as claimed in claim [[17]] 16, wherein:

[[the]] said first power of said excitation light is zero ~~amount of power~~, and [[the]] said second power of said excitation light is non-zero ~~amount of power controlled by the controlling step~~.

19. (currently amended) A method of measuring Raman gain of an optical fiber, comprising steps of:

outputting an excitation light to [[the]] an optical fiber;

outputting a test light to [[the]] said optical fiber; the wavelength of [[which]] the test light is different from the wavelength of [[the]] said excitation light;

measuring a power of a first back-scattered light, coming from [[the]] said optical fiber, excited by a first power of [[the]] said excitation light, and a power of a second back-scattered light, coming from [[the]] said optical fiber, excited by a second power of [[the]] said excitation light; and

controlling [[the]] said second power of said excitation light so as to make the ratio of the power of said first back-scattered light to the power of said second back-scattered light constant at a certain section of said optical fiber ~~based on the result of measuring step;~~

~~multiplexing the excitation light and the test light wavelength going to the optical fiber; and~~

~~demultiplexing at least one of the first back-scattered light and the second back-scattered light coming from the optical fiber~~.

20. (canceled)

21. (new) The Raman amplifying apparatus as claimed in claim 1, wherein said certain section of said optical fiber is a section which is not buried in the noise.

22. (new) The Raman amplifying apparatus as claimed in claim 4, wherein said certain section of said optical fiber is a section which is not buried in the noise.

23. (new) The Raman amplifying apparatus as claimed in claim 6, wherein said certain section of said optical fiber is a section which is not buried in the noise.

24. (new) The Raman amplifying apparatus as claimed in claim 9, wherein said certain section of said optical fiber is a section which is not buried in the noise.

25. (new) The relay station as claimed in claim 11, wherein said certain section of said optical fiber is a section which is not buried in the noise.

26. (new) The relay station as claimed in claim 14, wherein said certain section of said optical fiber is a section which is not buried in the noise.

27. (new) The method as claimed in claim 16, wherein said certain section of said optical fiber is a section which is not buried in the noise.

28. (new) The method as claimed in claim 19, wherein said certain section of said optical fiber is a section which is not buried in the noise.